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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/767,455	01/23/2001	Dale A. Sather	MS158383.1	9738

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EXAMINER	
SMITH, PETER J	

ART UNIT	PAPER NUMBER
2176	

DATE MAILED: 08/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/767,455	SATHER, DALE A.	
	Examiner	Art Unit	
	Peter J Smith	2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 January 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☒ Claim(s) *9 and 10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 January 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *02072002, 07312002*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to communications: application filed on 1/23/2001, IDS filed on 2/7/2002 and 7/31/2002.

2. Claims 1-27 are pending in the case. Claims 1, 7, 12, 18, 19, 22, 23, 25, and 27 are independent claims.

Claim Objections

3. Claims 9 and 10 are objected to because of the following informalities: These claims depend on themselves. The Examiner has treated claim 9 as depending on claim 8 and claim 10 as depending on claim 9 for the purposes of examination. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-10, 12-16, 18, 23-26, rejected under 35 U.S.C. 102(e) as being anticipate by Jacobs, US 6,681,221 B1 filed 10/18/2000.

Regarding independent claim 1, Jacobs discloses an item component for representing data elements in fig. 1-3, col. 2 lines 12-28, and col. 2 line 55 – col. 3 line 13. Jacobs discloses a relation component for representing associations between items in fig. 2-3 and col. 3 lines 14-45.

Jacobs discloses an attribute component for representing information about items in fig. 3 and col. 3 lines 23-26.

Regarding dependent claim 2, Jacobs discloses that the item component represents a text element in fig. 3, col. 2 lines 12-28, and col. 3 line 14 – col. 4 line 10.

Regarding dependent claim 3, Jacobs discloses that the item component corresponds to an XML element in fig. 3, col. 2 lines 12-28, and col. 3 line 14 – col. 4 line 10.

Regarding dependent claim 4, Jacobs discloses an attribute component corresponding to XML attributes and property elements that do not refer to an XML element in fig. 3, col. 2 lines 12-28, and col. 3 line 14 – col. 4 line 10.

Regarding dependent claim 5, Jacobs discloses a relation component corresponding to an XML element parent and child relationship in fig. 3, col. 2 lines 12-28, and col. 3 line 14 – col. 4 line 10.

Regarding dependent claim 6, Jacobs discloses a relation component corresponding to XML attributes and property elements whose value refers to an XML element in fig. 3, col. 2 lines 12-28, and col. 3 line 14 – col. 4 line 10.

Regarding independent claim 7, Jacobs discloses a parsing component adapted to parse an XML document into a semantic list; and a transformation component adapted to transform the semantic list into a tangled structure semantic document object model in fig. 2-3, col. 2 lines 12-28, and col. 2 line 55 – col. 4 line 10. The tangled structure is particularly presented in fig. 2.

Regarding dependent claim 8, Jacobs discloses a transformation component which is a relational rule set operable to provide associations between XML elements for representing the

XML document in the tangled structure semantic document object model in fig. 2-3, col. 2 lines 12-28, and col. 2 line 55 – col. 4 line 10.

Regarding dependent claim 9, Jacobs discloses a relational rule set being a plurality of relational rule patterns in fig. 2-3, col. 2 lines 12-28, and col. 2 line 55 – col. 4 line 10.

Regarding dependent claim 10, Jacobs discloses a plurality of relational rule patterns being constructor patterns in fig. 2-3, col. 2 lines 12-28, and col. 2 line 55 – col. 4 line 10.

Regarding independent claim 12, Jacobs discloses parsing an XML document into a semantic list; and transforming the semantic list into a tangled structure semantic document object model in fig. 2-3, col. 2 lines 12-28, and col. 2 line 55 – col. 4 line 10.

Regarding dependent claim 13, Jacobs discloses transforming the semantic list into a hierarchical semantic document object model prior to the step of transforming into a tangled structure object model in fig. 2-3, col. 2 lines 12-28, and col. 2 line 55 – col. 4 line 10.

Regarding dependent claim 14, Jacobs discloses manipulating the elements, attributes and text of the semantic list employing a relational rule set in fig. 2-3, col. 2 lines 12-28, and col. 2 line 55 – col. 4 line 10.

Regarding dependent claim 15, Jacobs discloses that the relational rule set is a plurality of relational rule patterns in fig. 2-3, col. 2 lines 12-28, and col. 2 line 55 – col. 4 line 10.

Regarding dependent claim 16, Jacobs discloses that the plurality of relational rule patterns are constructors in fig. 2-3, col. 2 lines 12-28, and col. 2 line 55 – col. 4 line 10.

Regarding independent claim 18, Jacobs discloses parsing an XML document into a semantic tree; and transforming the semantic tree into a tangled structure semantic document object model in fig. 2-3, col. 2 lines 12-28, and col. 2 line 55 – col. 4 line 10.

Regarding independent claim 23, Jacobs discloses parsing an XML document into a semantic list; transforming the semantic list into a hierarchical semantic document object model; and transforming the semantic document object model into a tangled structure semantic document object model in fig. 2-3, col. 2 lines 12-28, and col. 2 line 55 – col. 4 line 10.

Regarding dependent claim 24, Jacobs discloses manipulating items, relations and attributes by employing a relational generation rule set in fig. 2-3, col. 2 lines 12-28, and col. 2 line 55 – col. 4 line 10.

Regarding independent claim 25, Jacobs discloses a relational pattern component having a plurality of relational patterns operable to query data from the data structure and insert data into the data structure; and an interface component operable to provide programs and applications access to invocation of relational patterns within the pattern component in fig. 2-3, col. 2 lines 12-28, and col. 2 line 55 – col. 4 line 10.

Regarding dependent claim 26, Jacobs discloses the interface component being one or more application program interfaces in fig. 2-3, col. 2 lines 12-28, and col. 2 line 55 – col. 4 line 10.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claim 11, 17, 19-22, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobs, US 6,681,221 B1 filed 10/18/2000.

Regarding dependent claim 11, Jacobs teaches an XML parser for transforming an XML document representation into a tangled structure object model in fig. 2-3, col. 2 lines 12-28, and col. 2 line 55 – col. 4 line 10. Jacobs does not specifically teach a transformation component which is an XML schema with relational pattern elements added to elements and attributes of the XML schema. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the transformation component of Jacobs to have been an XML schema so that the document transformation would have been constrained.

Regarding dependent claim 17, Jacobs teaches an XML parser for transforming an XML document representation into a tangled structure object model in fig. 2-3, col. 2 lines 12-28, and col. 2 line 55 – col. 4 line 10. Jacobs does not specifically teach a transformation component which is an XML schema with relational pattern elements added to elements and attributes of the XML schema. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the transformation component of Jacobs to have been an XML schema so that the document transformation would have been constrained.

Regarding independent claim 19, Jacobs teaches determining a relationship to be applied between at least two data elements; and applying a rule to identify the relationship between the at least two data elements in fig. 2-3, col. 2 lines 12-28, and col. 2 line 55 – col. 4 line 10. Jacobs does not teach associating a text element with the relationship to identify the relationship. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Jacobs to have associated a text element instead of a

variable name to identify the relationship between two elements so that the relationship would be available for identification to a user of the document.

Regarding dependent claim 20, Jacobs teaches that the at least two data elements are XML elements having a parent and child relationship in fig. 2-3, fig. 5-6, col. 2 lines 12-28, col. 2 line 55 – col. 4 line 10, col. 4 lines 39-46, and col. 4 line 60 – col. 5 line 14.

Regarding dependent claim 21, Jacobs teaches that the at least two data elements are an XML element and an XML attribute whose value refers to an XML element in fig. 2-3, col. 2 lines 12-28, and col. 2 line 55 – col. 4 line 10.

Regarding independent claim 22, Jacobs teaches determining a relationship to be applied between at least two data elements; and applying a rule to identify the relationship between the at least two data elements in fig. 2-3, col. 2 lines 12-28, and col. 2 line 55 – col. 4 line 10. Jacobs does not teach associating a text element with the relationship to identify the relationship. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Jacobs to have associated a text element instead of a variable name to identify the relationship between two elements so that the relationship would be available for identification to a user of the document.

Regarding independent claim 27, Jacobs teaches an XML parser for transforming an XML document representation into a tangled structure object model in fig. 2-3, col. 2 lines 12-28, and col. 2 line 55 – col. 4 line 10. Jacobs does not specifically teach a transformation component which is an XML schema with relational pattern elements added to elements and attributes of the XML schema. It would have been obvious to one of ordinary skill in the art at

the time the invention was made to have modified the transformation component of Jacobs to have been an XML schema so that the document transformation would have been constrained.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tenev et al., US 6,108,698 filed 7/29/1998 discloses parsing and converting a tree into a tangled object model in fig. 1 and fig. 4. Fontana et al., US 6,611,847 B1 filed 12/30/1999 discloses dynamically linking two objects in two different models. Lord et al., US 6,665,863 B1 filed 5/31/2000 discloses a directed graph detailing relationships between objects. Hsu et al., US 6,574,644 B2 filed 11/26/1997 discloses in fig. 13 a document tree containing element attributes, ancestor relationships, descendent relationships, and sibling relationships. DeRose et al., US 5,893,109 filed 3/15/1996 discloses a document tree in which a document element may point a relationship to another document element. This is shown in fig. 3.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Smith whose telephone number is 703-305-5931. The examiner can normally be reached on Mondays-Fridays 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H Feild can be reached on 703-305-9792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

10. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703-872-9306) (for formal/after-final communications intended for entry)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Fourth Floor (Receptionist).

PJS
July 27, 2004

William L. Bashore

WILLIAM L. BASHORE
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